



## DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO

GOVERNOR

MIKE D. McDANIEL, Ph.D.

SECRETARY

Certified Mail No.: 7005 1160 0005 2991 3616

Agency Interest No.: 2538

Activity No.: PER20050011

Mr. John G. Gott  
Manager, Lake Charles Refinery  
ConocoPhillips Company  
Post Office Box 37  
Westlake, Louisiana 70669

RE: PSD-LA-584 (M-4), Petrozuata Syncrude Project, Lake Charles  
Refinery, ConocoPhillips Company, Westlake, Calcasieu Parish,  
Louisiana

Dear Mr. Gott:

Enclosed is your permit, PSD-LA-584 (M-4). Operation of the  
proposed project is not allowed until such time as the  
corresponding operating permits are issued.

Should you have any questions concerning the permit, contact Dr.  
Qingming Zhang at 225-219-3125.

Sincerely,

Chuck Carr Brown, Ph.D.  
Assistant Secretary

5/9/06  
Date

CCB:QMZ

c: US EPA Region VI

**ENVIRONMENTAL SERVICES**

: PO BOX 4313, BATON ROUGE, LA 70821-4313

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AUTHORIZATION TO MODIFY AND OPERATE AN EXISTING FACILITY  
PURSUANT TO THE PREVENTION OF SIGNIFICANT DETERIORATION  
REGULATIONS IN LOUISIANA ENVIRONMENTAL REGULATORY CODE,  
LAC 33:III.509

In accordance with the provisions of the Louisiana Environmental  
Regulatory Code, LAC 33:III.509,

ConocoPhillips Company (AI No. 2538)  
2200 Old Spanish Trail  
Westlake, Louisiana 70669


is authorized to implement the Petrozuata Syncrude Project at the  
Lake Charles Refinery in

Westlake  
Calcasieu Parish, Louisiana

subject to the emission limitations, monitoring requirements, and  
other conditions set forth hereinafter.

This permit and authorization to construct shall expire at midnight  
on March 20, 2004, unless physical on site construction  
has begun by such date, or binding agreements or contractual  
obligations to undertake a program of construction of the source  
are entered into by such date.

Signed this 19<sup>th</sup> day of MAY, 2006.

  
Chuck Carr Brown, Ph.D.  
Assistant Secretary  
Office of Environmental Services  
Louisiana Department of Environmental Quality

## BRIEFING SHEET

PETROZUATA SYNCRUDE PROJECT  
LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY  
WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538  
PSD-LA-584 (M-4)

### PURPOSE

The Petrozuata Syncrude Project modified the Lake Charles Refinery to process Petrozuata Syncrude. The ability to process this syncrude (a mixture of virgin crude and cutter stock) secures a guaranteed crude supply through joint venture agreements and increases production of heavy products such as diesel, gas oil, light cycle oil, slurry oil, and cracked distillate. In addition, modifications to various process units are required to enable the facility to process the increased sulfur load associated with refining the syncrude. The Petrozuata Syncrude Project, along with the Fluid Catalytic Cracker (FCC) Riser Modification and Excel Paralubes Hydrocracker Capacity Increase Projects was approved under PSD Permit PSD-LA-584 (M-3) and Part 70 Operating Permits 2623-V1, 2624-V1, 2625-V1, 2626-V1, and 2627-V1, issued September 20, 2002.

This modification will reconcile emission limits in Specific Condition 1 with the limits approved in the most recent Part 70 Permits 2623-V3, 2624-V4, and 2627-V2, issued August 24, 2005. Since the changes are not project related, this modification does not change and will retain the analysis, determination, and conclusions presented in Permit PSD-LA-584 (M-3), issued September 20, 2002.

### RECOMMENDATION

Approval of issuance of a PSD permit modification.

### REVIEWING AGENCY

Louisiana Department of Environmental Quality - Office of Environmental Services.

### PROJECT DESCRIPTION

The Petrozuata Syncrude Project was first approved under Permit PSD-LA-584 (M-2) and Part 70 Operating Permits 2623-V0, 2624-V0, 2625-V0, 2626-V0, and 2627-V0, granted August 12, 1999. During the construction phase of the project, ConocoPhillips Company (formerly Conoco Inc.) recalculated the steam demand from the refinery boilers, revised emissions from the project-affected heaters, and incorporated two additional projects associated with the Petrozuata Syncrude Project: the Fluid Catalytic Cracker (FCC) Riser

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PETROZUATA SYNCRUDE PROJECT  
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WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538  
PSD-LA-584 (M-4)

Modification and Excel Paralubes Hydrocracker Capacity Increase Projects. In addition, ConocoPhillips requested approval to implement the No. 10 HDS/CCR Capacity Increase Project. These projects and changes were approved under PSD Permit PSD-LA-584 (M-3) and Part 70 Operating Permits 2623-V1, 2624-V1, 2625-V1, 2626-V1, and 2627-V1, issued September 20, 2002.

Estimated emissions from the Petrozuata Syncrude Project affected sources in tons per year are as follows:

Pollutant	Actual Emissions	Proposed Emissions	Contem- poraneous Change(a)	Net Change	PSD de minimis
PM <sub>10</sub>	36.2	61.3	+ 3.6	+ 28.7	15
SO <sub>2</sub>	171.2	258.7	- 78.8	+ 8.7	40
NO <sub>x</sub>	368.8	357.2	+ 52.1	+ 40.5	40
CO	81.6	160.9	+ 37.5	+ 116.8	100
VOC	7.1	12.1	- 81.1	- 76.1	40

- (a) The Petrozuata Syncrude Project began in August 1999 and the construction of the project was completed in November 2000. The firing rates for Boilers B-6 and B-76001 will be increased for the project upon issuance of this PSD permit. The contemporaneous period is between 1994 and 2002.

PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and CO emission increases from the Petrozuata Syncrude Project are above their respective Prevention of Significant Deterioration (PSD) significance levels. Contemporaneous changes from various projects during the 1994 - 2002 period net SO<sub>2</sub> out of PSD review. It was determined by Permit PSD-LA-584 (M-2) that PM<sub>10</sub>, NO<sub>x</sub>, and CO must undergo PSD analysis.

The FCC Riser Modification and Excel Paralubes Hydrocracker Capacity Increase projects are associated with the Petrozuata Syncrude Project. These projects did not increase any permitted emissions. The potential emission increases due to the projects have already been accounted for in the Petrozuata Syncrude Project.

The No. 10 HDS/CCR Capacity Increase Project is not associated with the Petrozuata Syncrude Project. It affected six heaters (H-16001, H-16101, H-16102, H-16103, H-16104, and H-16105). However, all of the heaters operate under the permitted limits. Each of the heaters is equipped with an ultra low-NO<sub>x</sub> burner. Potential emission increases due to the project are:

## BRIEFING SHEET

PETROZUATA SYNCRUDE PROJECT  
LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY  
WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538  
PSD-LA-584 (M-4)

PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
7.6	13.5	43.4	19.9	1.8

The potential NO<sub>x</sub> emission increase is over PSD de minimis and there are no other contemporaneous changes to net out NO<sub>x</sub> from PSD review. Therefore, PSD review on NO<sub>x</sub> emissions for the project is required.

### TYPE OF REVIEW

The application was reviewed in accordance with PSD regulations for PM<sub>10</sub>, NO<sub>x</sub>, and CO emissions. The selection of control technology based on the BACT analysis included consideration of control of toxic materials.

### BEST AVAILABLE CONTROL TECHNOLOGY

PM<sub>10</sub>, NO<sub>x</sub>, and CO emissions are above PSD significance levels and must undergo PSD analysis. Controls of these pollutants were analyzed using a "top down" approach.

Ultra low-NO<sub>x</sub> burners (ULNBs) with an estimated emission rate of 0.06 lb NO<sub>x</sub>/MM BTU constitute BACT for NO<sub>x</sub> emissions from new or modified process heaters, except Heater H-1101, associated with the Petrozuata Syncrude Project. Heater H-1101 was physically modified in 1996. It was built with multiple chambers and equipped with ultra low-NO<sub>x</sub> burners. The burners chosen for this heater produce a shorter flame length necessary to prevent flame impingement on the wall of the chambers. The stack tests performed in May 2001 showed that the technology achieved a NO<sub>x</sub> emission rate of 0.081 lb/MM BTU.

ULNBs were also determined as BACT to limit NO<sub>x</sub> emissions from the sulfur recovery unit to 0.18 lbs/MM BTU. Design and proper operating practices were determined to be BACT for control of CO emissions from the sulfur recovery unit and affected process heaters. Design, proper operation, and burning clean fuel were determined to be BACT for PM<sub>10</sub> emissions from the sulfur recovery unit and affected process heaters. A drift eliminator was determined to be BACT for control of PM<sub>10</sub> from the cooling water tower.

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PSD-LA-584 (M-4)

### AIR QUALITY IMPACT ANALYSIS

Prevention of Significant Deterioration regulations require an analysis of existing air quality for those pollutants emitted in significant amounts from a major modification.

Screening dispersion modeling (ISCST3) indicated that the maximum ground level concentrations of PM<sub>10</sub>, NO<sub>x</sub>, and CO were below the preconstruction monitoring exemption levels and the ambient significance levels. No preconstruction monitoring, increment analysis, or refined modeling was required.

### ADDITIONAL IMPACTS

Soils, vegetation, and visibility will not be adversely impacted by the proposed facility, nor will any Class I area be affected. No new permanent jobs will be created.

### PROCESSING TIME

Application Dated:	November 3, 2005
Application Received:	November 3, 2005
Additional Information Dated:	November 30, 2005

### PUBLIC NOTICE

A notice requesting public comment on the permits was published in *The Advocate*, Baton Rouge, and in the *Lake Charles American Press*, on March 15, 2006. The public notice was also sent to persons included in the LDEQ mailing list on March 13, 2006. The proposed permit modification was also submitted to US EPA Region VI. Comments from the company, dated April 13, 2006, were received. No comment from the general public was received.

## PRELIMINARY DETERMINATION SUMMARY

### PETROZUATA SYNCRUDE PROJECT LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538 PSD-LA-584 (M-4)

#### I. APPLICANT

ConocoPhillips Company  
2210 Old Spanish Trail  
Westlake, Louisiana 70669

#### II. LOCATION

ConocoPhillips' Lake Charles Refinery is located at 2210 Old Spanish Trail, north of Interstate 10 at Westlake. Approximate UTM coordinates are 473.4 kilometers east and 3,345.3 kilometers north in Zone 15.

#### III. PROJECT DESCRIPTION

By implementing the Petrozuata Syncrude Project, the Refinery would have capacity to process Petrozuata Syncrude from the Orinoco Tar Belt in Venezuela, the largest heavy oil deposit found in the world. The ability to process this syncrude secures a guaranteed crude supply through joint venture agreements and increases production of heavy products such as diesel, gas oil, light cycle oil, slurry oil, and cracked distillate.

Petrozuata Syncrude Project completed construction in November 2000. ConocoPhillips recalculated the steam demand and/or firing rates of boilers and heaters and incorporated two additional projects associated with the Petrozuata Syncrude Project: the Fluid Catalytic Cracker (FCC) Riser Modification and Excel Paralubes Hydrocracker Capacity Increase Projects. ConocoPhillips also requested approval to implement the No. 10 HDS/CCR Capacity Increase Project.

## PRELIMINARY DETERMINATION SUMMARY

PETROZUATA SYNCRUDE PROJECT  
LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY  
WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538  
PSD-LA-584 (M-4)

Estimated emissions from the Petrozuata Syncrude Project affected sources in tons per year are as follows:

<u>Pollutant</u>	<u>Actual Emissions</u>	<u>Proposed Emissions</u>	<u>Contem- poraneous Change(a)</u>	<u>Net Change</u>	<u>PSD de minimis</u>
PM <sub>10</sub>	36.2	61.3	+ 3.6	+ 28.7	15
SO <sub>2</sub>	171.2	258.7	- 78.8	+ 8.7	40
NO <sub>x</sub>	368.8	357.2	+ 52.1	+ 40.5	40
CO	81.6	160.9	+ 37.5	+ 116.8	100
VOC	7.1	12.1	- 81.1	- 76.1	40

- (a) The Petrozuata Syncrude Project began in August 1999 and the construction of the project was completed in November 2000. The firing rates for Boilers B-6 and B-76001 will be increased for the project upon issuance of this PSD permit. The contemporaneous period is between 1994 and 2002.

PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and CO emission increases from the Petrozuata Syncrude Project are above their respective Prevention of Significant Deterioration (PSD) significance levels. Contemporaneous changes from various projects during the 1994 - 2002 period net SO<sub>2</sub> out of PSD review. It was determined by Permit PSD-LA-584 (M-2) that PM<sub>10</sub>, NO<sub>x</sub>, and CO must undergo PSD analysis. Emissions of these pollutants are controlled by Best Available Control Technology.

The FCC Riser Modification and Excel Paralubes Hydrocracker Capacity Increase projects are associated with the Petrozuata Syncrude Project. These projects did not increase any permitted emissions. The potential emission increases due to the projects have already been accounted for the Petrozuata Syncrude Project.

The No. 10 HDS/CCR Capacity Increase Project is not associated with the Petrozuata Syncrude Project. It affected six heaters (H-16001, H-16101, H-16102, H-16103, H-16104, and H-16105). However, all of the heaters operate under the permitted limits. Each of the heaters is equipped with ultra low-NO<sub>x</sub> burners.



## PRELIMINARY DETERMINATION SUMMARY

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WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538  
PSD-LA-584 (M-4)

Potential emission increases due to the project are:

PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
7.6	13.5	43.4	19.9	1.8

The potential NO<sub>x</sub> emission increase is over PSD de minimis and there are no other contemporaneous changes to net out NO<sub>x</sub> from PSD review. Therefore, PSD review on NO<sub>x</sub> emissions for the project is required.

### Revision of PSD-LA-533 (M-3)

PSD Permit PSD-584 (M-3) modified the applicable requirements on Boilers No. 5 and No. 6 in PSD-LA-533 (M-3), dated April 29, 1994. Since the terms of PSD-LA-533 (M-3) on Boilers No. 5 and No. 6 have been incorporated into this PSD permit, a separate revision is not required for this change.

Specific Condition 6 of Permit PSD-LA-533 (M-3), which limits the firing rates of Boilers No. 5 and No. 6, was first established in 1992. It limited NO<sub>x</sub> potential to emit (PTE) so that the NO<sub>x</sub> emission increases from the Gasoline RVP Reduction Project in 1992 would be below the PSD significance level of 40 tons per year. Both boilers are equipped with low NO<sub>x</sub> burners. ConocoPhillips installed a flue gas recirculation (FGR) system (determined as BACT) on the Boiler No. 6. With the improved NO<sub>x</sub> emission control on Boiler No. 6, the combined NO<sub>x</sub> PTE from these two boilers is physically limited to less than the NO<sub>x</sub> emission limit imposed by Specific Condition 6. Thus, removal of this specific condition would not trigger PSD review on NO<sub>x</sub> for the Gasoline RVP Reduction Project.

By PSD Permit PSD-584 (M-3), Specific Condition 6 of Permit PSD-LA-533 (M-3) is rescinded. Boilers No. 5 and No. 6 are authorized to operate year round (8760 hours/year) at maximum firing rates. Emissions from these boilers are limited by the Specific Condition 1 of this PSD permit and related Part 70 permit. All other conditions of PSD-LA-533 (M-3) permit will remain the same.

## PRELIMINARY DETERMINATION SUMMARY

PETROZUATA SYNCRUDE PROJECT  
LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY  
WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538  
PSD-LA-584 (M-4)

### IV. SOURCE IMPACT ANALYSIS

A proposed net increase in the emission rate of a regulated pollutant above de minimis levels for modified major sources requires review under PSD regulations, 40 CFR 52.21. PSD permit reviews of proposed new or modified major stationary sources require the following analyses:

- A. A determination of the Best Available Control Technology (BACT);
- B. Analysis of the existing air quality and a determination of whether or not preconstruction or postconstruction monitoring will be required;
- C. An analysis of the source's impact on total air quality to ensure compliance with the National Ambient Air Quality Standards (NAAQS);
- D. An analysis of the PSD increment consumption;
- E. An analysis of the source related growth impacts;
- F. An analysis of source related impacts on soils, vegetation, and visibility;
- G. A Class I Area impact analysis; and
- H. An analysis of the impact of toxic compound emissions.

#### A. BEST AVAILABLE CONTROL TECHNOLOGY

Under current PSD regulations, an analysis of "top down" BACT is required for the control of each regulated pollutant emitted from a modified major source in excess of the specified significant emission rates. The top down approach to the BACT process involves determining the most stringent control technique available for a similar or identical source. If it can be shown that this level of control is infeasible based on technical, environmental, energy, and/or cost considerations, then it is rejected and the next most stringent level of control is determined and similarly evaluated. This process continues until a control level is arrived at which cannot be eliminated for any technical, environmental, or economic reason. A technically feasible control strategy is one that has been demonstrated to function efficiently on identical or similar processes.

## PRELIMINARY DETERMINATION SUMMARY

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LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY  
WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538  
PSD-LA-584 (M-4)

PSD-LA-584 (M-2) authorized ConocoPhillips to implement the Petrozuata Syncrude Project. During the construction of the project, ConocoPhillips recalculated the steam balance. The firing rates and emissions from heaters and boilers were changed accordingly. Because the method of operation (increase firing rate which causes collateral emission increase) of Boiler B-6 and B-76001 was changed, a BACT analysis is required for PM<sub>10</sub>, NO<sub>x</sub>, and CO emissions.

Heaters H-16001, H-16101, H-16102, H-16103, H-16104, and H-16105 were affected by the No. 10 HDS/CCR Capacity Increase Project. Actual firing rates of these heaters were increased (increase the utilization of the capacities of the heaters), which caused NO<sub>x</sub> emissions to increase more than the PSD significance level. No physical modification on the heaters was required and the permitted emission limits for the heaters were not changed. A BACT analysis is not required for emissions from these heaters.

BACT analysis for emissions from the Petrozuata Syncrude Project affected points are given below:

BACT analysis for NO<sub>x</sub> emissions from Boilers B-6, B-76001

Selective catalytic reduction (SCR), also known as thermal DeNO<sub>x</sub>, is the most effective post-combustion NO<sub>x</sub> control method considered. In this process, a reducing agent is introduced into the flue gas, upstream of a catalyst bed, which is maintained at elevated temperature. With ammonia as the reducing agent, the thermal DeNO<sub>x</sub> process can reduce over 80% of NO<sub>x</sub> emissions. However, ammonia emissions are a negative side effect of the technology. Implementing SCR would require substantial capital expenditures and additional energy to keep the catalyst bed at high temperatures.

Selective non-catalytic reduction (SNCR) is a post-combustion process in which a reagent mixture is injected into the flue gas stream at elevated temperatures. Using urea solution as reagent, the NO<sub>x</sub>OUT™ process converts NO<sub>x</sub> emissions into water, nitrogen, and carbon dioxide. The process may release ammonia during the incomplete decomposition of urea. Additional energy is required to increase flue gas temperature to process conditions.

## PRELIMINARY DETERMINATION SUMMARY

PETROZUATA SYNCRUDE PROJECT  
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PSD-LA-584 (M-4)

Low NO<sub>x</sub> burners are designed for distributed air flow, distributed fuel input, and minimal flame length to optimize equipment conditions and minimize NO<sub>x</sub> levels. The amount of NO<sub>x</sub> formed during combustion is influenced by time, temperature, and oxygen concentration. Low NO<sub>x</sub> burners reduce NO<sub>x</sub> formation by lowering flame temperatures. No additional energy is required.

The air/natural gas mixture fed to the combustion chambers can be diluted with hot flue gas to reduce NO<sub>x</sub> emissions via lowering flame temperature and suppressing partial oxygen vapor pressure. This technique is known as flue gas recirculation (FGR). Thirty percent of total flue gas can be recirculated to reduce NO<sub>x</sub> by as much as 75 percent. FGR will reduce the equipment efficiency and additional energy is required to recirculate the flue gas.

SCONO<sub>x</sub> technology operates at a temperature range of 300° F to 700° F. It utilizes a single catalyst system to control both carbon monoxide and NO<sub>x</sub>. CO is oxidized to carbon dioxide while NO<sub>x</sub> is converted to NO<sub>2</sub>, which is adsorbed onto the catalyst surface. This new technology has only been demonstrated for gas turbines.

XONON is a flameless catalytic system, which limits the temperature in the combustor below the NO<sub>x</sub> formation threshold. The XONON system has been tested for small gas turbines.

The high cost effectiveness rejects SCR as a feasible BACT option. SCONO<sub>x</sub> and XONON are in the development phase for gas turbines. These options were rejected as technically infeasible for boilers.

The remaining option is low-NO<sub>x</sub> burners (LNB) in combination with flue gas recirculation (FGR). This technique is also known as ultra low-NO<sub>x</sub> burners (ULNB). The ULNB are selected as BACT to maintain maximum NO<sub>x</sub> emissions from these boilers at 0.06 lbs/MM BTU.

## PRELIMINARY DETERMINATION SUMMARY

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PSD-LA-584 (M-4)

### BACT analysis for CO emissions from Boilers B-6 and B-76001

Thermal oxidation is the first control option considered for CO emissions. Flue gas from combustion equipment could be routed through the thermal oxidizer where the gas will be heated to an operating range of 1,200 - 2,000°F. At this temperature, carbon monoxide and VOC will be burned to carbon dioxide. Raising exit gas to the appropriate temperature range will require a significant amount of energy and generate a large quantity of secondary emissions.

Catalytic combustion of carbon monoxide is another control option. Flue gas can be burned in a catalyst bed at 650 - 800°F. Approximately 90 percent of the carbon monoxide would be converted to carbon dioxide. Additional energy is required to heat the flue gas and send it through the catalyst bed. The catalyst bed, containing heavy metals, requires replacement and recycling and/or disposal.

CO emissions can also be controlled using good equipment design, gaseous fuels for good mixing, and proper combustion techniques. These control options are usually less efficient than the oxidation technologies, but they have minimal environmental and economic impact.

BACT for NO<sub>x</sub> is also considered BACT for CO, since optimizing burners for CO influences NO<sub>x</sub> emissions. The environmental impacts, such as secondary emissions and waste generation (spent catalyst), eliminated thermal and catalytic oxidizers as BACT for CO emissions from Boilers B-6 and B-76001.

Since ULNB are determined as BACT for NO<sub>x</sub>, good design, using gaseous fuels for good mixing, and proper operating techniques were determined to be BACT for CO emissions from Boilers B-6 and B-76001.

### BACT analysis for PM<sub>10</sub> from Boilers B-6 and B-76001

Control techniques for PM<sub>10</sub> include cyclones, electrostatic precipitators (ESP), fabric filters, good combustion practices, and use of clean fuels.

## PRELIMINARY DETERMINATION SUMMARY

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PSD-LA-584 (M-4)

Cyclones collect particulate laden gases and force them to spin in a vortex resulting in a change in direction of the particles. The particles then drop out of the gas stream. Cyclones are generally used to reduce dust loading and collect large particles.  $PM_{10}$  emissions of very low concentrations from boilers would not be effectively captured in a cyclone.

ESPs operate by electrically charging particles and then separating them from the gas stream with a collector of opposite charge. High voltage direct current discharge electrodes, typically wires, are suspended in the gas stream to impose a negative charge on the particles. The particles are driven to positive collecting electrodes (typically plates) located opposite the wires. Particles are removed from the collection plates by rapping devices that strike the collection and discharge electrodes. The dust falls into hoppers and is conveyed to a disposal system. ESPs are usually used to capture coarse particles at high concentrations. Small particles at low concentrations cannot be effectively collected by an ESP.

In the fabric filter or baghouse, particle laden gas passes through the filter bags, retaining particles on the filters. The filters are periodically cleaned via shaking, reverse air flow, or pulse jet cleaning. During cleaning, particles are deposited in a hopper for subsequent disposal. Fabric filters are used for medium and low gas flow streams with high particulate concentrations.

Particulate emissions from Boilers B-6 and B-76001 are 0.0030 grains/scf and 0.0042 grains/scf, respectively, which are lower than the performance guarantee of most cyclones, ESPs, or baghouses. Using cyclones, baghouses, or ESPs to control  $PM_{10}$  emissions from these boilers is impractical. The remaining options are good combustion practices and using clean fuel gas. These were determined as BACT for particulate emissions from these boilers.

BACT determined by PSD-LA-584 (M-2)

Ultra low- $NO_x$  burners (ULNBs) with an estimated emission rate of 0.06 lb  $NO_x$ /MM BTU constitute BACT for  $NO_x$  emissions from new or modified process heaters associated with the project.

## PRELIMINARY DETERMINATION SUMMARY

PETROZUATA SYNCRUDE PROJECT  
LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY  
WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538  
PSD-LA-584 (M-4)

(Note: Heater H-1101 was physically modified in 1996. It was built with multiple chambers and equipped with ultra low-NO<sub>x</sub> burners. The burners chosen for this heater produce a shorter flame length necessary to prevent flame impingement on the wall of the chambers. The stack tests performed in May 2001 shown that the technology achieves a NO<sub>x</sub> emission rate of 0.081 lb/MM BTU.)

ULNBs were also determined as BACT to limit NO<sub>x</sub> emissions from the sulfur recovery unit to 0.18 lbs/MM BTU. Design and proper operating practices were determined to be BACT for control of CO emissions from the sulfur recovery unit and affected process heaters. Proper design and operation and burning clean fuel were determined to be BACT for PM<sub>10</sub> emissions from the sulfur recovery unit and affected process heaters. A drift eliminator was determined to be BACT for control of PM<sub>10</sub> from the cooling water tower.

The burners of No. 7 HDS Heater H-3232, operated under PSD-LA-533 (M-3) and No.7 HDS HVGO Heater H-3201, operated under PSD-LA-390, were replaced with ultra low-NO<sub>x</sub> burners (ULNB) to limit NO<sub>x</sub> emissions to 0.06 lbs/MM BTU or less. The ULNB were determined as BACT for NO<sub>x</sub> emissions from these heaters. This BACT determination and NO<sub>x</sub> emission limits replace the BACT and corresponding limits set by PSD-LA-533 (M-3) and PSD-LA-390.

### B. ANALYSIS OF EXISTING AIR QUALITY

PSD regulations require an analysis of existing air quality for those pollutant emissions, which increase significantly from a proposed major modification. PM<sub>10</sub>, NO<sub>x</sub>, and CO are pollutants of concern in this case.

Screening dispersion modeling (ISCST3) of PM<sub>10</sub> emissions from the proposed project indicates the 24-hour and annual average of maximum off-site ground level concentrations are 1.75 and 0.069  $\mu\text{g}/\text{m}^3$ , respectively, which are below the modeling significance impact levels of 5 and 1  $\mu\text{g}/\text{m}^3$ . The 24-hour average concentration is also below the preconstruction monitoring exemption level of 10  $\mu\text{g}/\text{m}^3$ . Preconstruction monitoring, increment analysis, and refined modeling are not required.

## PRELIMINARY DETERMINATION SUMMARY

PETROZUATA SYNCRUDE PROJECT  
LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY  
WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538  
PSD-LA-584 (M-4)

Screening dispersion modeling of CO emissions from the proposed project indicates the 1-hour and 8-hour average of maximum off-site ground level concentrations are 115.26 and 53.43  $\mu\text{g}/\text{m}^3$ , which are below the modeling significance impact levels of 2,000 and 500  $\mu\text{g}/\text{m}^3$ . The 8-hour average concentration is also below the preconstruction monitoring exemption level of 575  $\mu\text{g}/\text{m}^3$ . Neither preconstruction monitoring, nor increment analysis, nor refined modeling is required.

Screening dispersion modeling of  $\text{NO}_x$  emissions from the proposed project indicates the annual average of maximum off-site ground level concentrations is 0.86  $\mu\text{g}/\text{m}^3$ , which is below the modeling significance impact levels of 1  $\mu\text{g}/\text{m}^3$  and the preconstruction monitoring exemption level of 14  $\mu\text{g}/\text{m}^3$ . Neither preconstruction monitoring, nor increment analysis, nor refined modeling is required. The Air Quality Analysis is shown in Table II.

### C. NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ANALYSIS

Refined modeling is not required for emissions of  $\text{PM}_{10}$ ,  $\text{NO}_x$ , and CO.

### D. PSD INCREMENT ANALYSIS

Increment analysis is not required for emissions of  $\text{PM}_{10}$ ,  $\text{NO}_x$ , and CO.

### E. SOURCE RELATED GROWTH IMPACTS

Operation of this facility is not expected to have any significant effect on residential growth or industrial/commercial development in the area of the facility. No significant net change in employment, population, or housing is associated with the project. As a result, there are not any significant increases in pollutant emissions indirectly associated with ConocoPhillips' proposal. Secondary growth effects will be minimal, as no new permanent jobs will be created.



## **PRELIMINARY DETERMINATION SUMMARY**

### **PETROZUATA SYNCRUDE PROJECT LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538 PSD-LA-584 (M-4)**

#### **F. SOILS, VEGETATION, AND VISIBILITY IMPACTS**

There will be no significant impact on area soils, vegetation, or visibility.

#### **G. CLASS I AREA IMPACTS**

Breton National Wildlife Area, the nearest Class I area, is more than 250 miles from the site, precluding any significant impact.

#### **H. TOXIC IMPACT**

The selection of control technology based on the BACT analysis included consideration of control of toxic emissions.

#### **V. CONCLUSION**

The Office of Environmental Services has made a preliminary determination to approve the implementation of the Petrozuata Syncrude Project (including the associated Fluid Catalytic Cracker Riser Modification and Excel Paralubes Hydrocracker Capacity Increase projects) and the No. 10 HDS/CCR Capacity Increase Project at the Lake Charles Refinery, in Westlake, Calcasieu Parish, Louisiana, subject to the attached specific and general conditions. In the event of a discrepancy in the provisions found in the application and those in this Preliminary Determination Summary, the Preliminary Determination Summary shall prevail.

# SPECIFIC CONDITIONS

## PETROZUATA SYNCRUDE PROJECT LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538 PSD-LA-584 (M-4)

- The permittee is authorized to operate in conformity with the specifications submitted to the Louisiana Department of Environmental Quality (LDEQ) as analyzed in LDEQ's document entitled "Preliminary Determination Summary" dated March 26, 2002 and subject to other specified conditions. Specifications submitted are contained in the application and Emissions Inventory Questionnaire dated July 10, 2000, as well as additional information dated November 15, 2000, October 8, 2001, and March 18, April 4, 11, 25, 2002, and November 3, 2005.

Maximum Allowable Emission Rates						
Emission Point No	Description	Units	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO
EP-23	High Pressure Boiler (B-6), 268 MM BTU/hr	lb/MM BTU	-		0.06	-
		lbs/hr	2.0	*	16.1	5.4
		TPY	6.0		47.3	15.8
EP-37	No. 3 CTU Heater (H-1101), 264 MM BTU/hr	lb/MM BTU	-		0.081	-
		lbs/hr	2.0	*	25.7	5.3
		TPY	8.8		93.7	23.1
EP-55	No. 7 HDS HVGO Heater (H-3201), 23 MM BTU/hr	lb/MM BTU	-		0.06	-
		lbs/hr	1.1	*	1.40	0.46
		TPY	4.8		6.0	2.0
EP-63	No. 4 HDS Heater (H-1201), 36.6 MM BTU/hr	lb/MM BTU	-		0.06	-
		lbs/hr	0.28	*	2.2	0.73
		TPY	1.2		9.6	3.2
EP-71	No. 3 Vacuum Unit Heater (H-1103), 100 MM BTU/hr	lb/MM BTU	-		0.06	-
		lbs/hr	0.76	*	6.0	2.0
		TPY	3.3		26.3	8.8
EP-72	No. 4 HDS Heater (H-1202), 60 MM BTU/hr	lb/MM BTU	-		0.06	-
		lbs/hr	0.46	*	3.6	1.2
		TPY	2.0		15.8	5.3
EP-73	No. 7 HDS Heater (H-3232), 23 MM BTU/hr	lb/MM BTU	-		0.06	-
		lbs/hr	0.17	*	1.40	0.46
		TPY	0.8		6.0	2.0
EP-104	No. 2 VCU Feed Heater (H-20002), 150 MM BTU/hr	lb/MM BTU	-		0.038	-
		lbs/hr	1.1	*	6.8	3.0
		TPY	5.0		25.0	13.1
EP-105	No. 10 HDS Charge Heater (H-16001), 20 MM BTU/hr	lb/MM BTU	-		0.051	-
		lbs/hr	0.15	*	1.0	0.4
		TPY	0.7		4.5	1.8
EP-106	No 10 CCR Heaters (H-16101, 2, 3, 4, 5), 460 MM BTU/hr	lb/MM BTU	-		0.043	-
		lbs/hr	3.5	*	19.8	9.2
		TPY	15.3		86.6	40.3
EP-109	High Pressure Boiler (B-76001), 418 MM BTU/hr	lb/MM BTU	-		0.06	-
		lbs/hr	3.2	*	13.8	8.4
		TPY	11.6		50.3	30.5

# SPECIFIC CONDITIONS

## PETROZUATA SYNCRUDE PROJECT LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538 PSD-LA-584 (M-4)

### Maximum Allowable Emission Rates

Emission Point No	Description	Units	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO
EP-111	Sulfur Recovery Unit, 481 LTPD	lb/MM BTU	-		0.18	-
		lbs/hr	1.5	*	7.5	12.4
		TPY	4.3		22.0	36.3
EP-143	No. 4 CTU Heater (H-4050), 237 MM BTU/hr	lb/MM BTU	-		0.032	-
		lbs/hr	1.8	*	9.1	4.7
		TPY	7.9		33.2	20.8
EP-153	Cooling Towers (Y-4 & Y-5), 50,800 gpm	lbs/hr	2.54	*	-	-
		TPY	5.6			

The following emission points were included in PSD-LA-584 (M-1), but are not affected by the Petrozuata Syncrude Project.

EP-17	No. 2 HDS Heater (H-24), 38 MM BTU/hr	lb/MM BTU	-	-	0.17	
		lbs/hr	0.3	1.0	6.5	*
		TPY	1.3	4.5	28.3	
EP-41	FCC Regenerator	lbs/hr	17.8	319.4	129.6	*
		TPY	56.9	1229.9	498.98	
EP-54	No. 6 HDS Heater (H-3101), 20 MM BTU/hr	lb/MM BTU	-	-	0.13	
		lbs/hr	0.2	0.5	2.6	*
		TPY	0.7	2.4	11.4	
EP-101	HDC Hydrogen Heater (H-11001), 82.5 MM BTU/hr	lb/MM BTU	-	-	0.03	
		lbs/hr	0.6	2.2	2.5	*
		TPY	2.2	8.0	8.97	
EP-102	HDW/HDF Reactor Charge Heater (H-12001), 38.3 MM BTU/hr	lb/MM BTU	-	-	0.03	
		lbs/hr	0.3	1.03	1.15	*
		TPY	1.0	3.6	3.9	
EP-103	HDW/HDF Reactor Charge Heater (H-12003), 53.7 MM BTU/hr	lb/MM BTU	-	-	0.03	
		lbs/hr	0.4	1.45	1.61	*
		TPY	1.6	5.7	6.3	
EP-110	LOHC Flare 1 (PU-76002), 18.27 MM BTU/hr	lb/MM BTU	-	-	0.08	
		lbs/hr	Neg.	83.8	15.53	*
		TPY	Neg.	39.0	38.4	
EP-112	Cooling Tower (Y-6), 40,000 gpm	lbs/hr	2.0	-	-	*
		TPY	4.4			
EP-118	HDC Atmospheric Tower Heater (H-11002), 58.1 MM BTU/hr	lb/MM BTU	-	-	0.03	
		lbs/hr	0.4	1.6	1.74	*
		TPY	1.54	3.8	6.2	
EP-119	HDC Vacuum Tower Heater (H-11003), 42.9 MM BTU/hr	lb/MM BTU	-	-	0.03	
		lbs/hr	0.3	1.2	1.3	*
		TPY	0.5	1.8	2.0	

\* The pollutant is not included in the PSD analysis for the related project.

- To ensure compliance with permitted emission limits, permittee shall perform stack tests for NO<sub>x</sub> and CO emissions from the

## SPECIFIC CONDITIONS

PETROZUATA SYNCRUDE PROJECT  
LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY  
WESTLAKE, CALCASIEU PARISH, LOUISIANA, AI NO. 2538  
PSD-LA-584 (M-4)

process heaters (H-1101, H-3201, H-1201, H-1103, H-1202, H-3232, H-4050), high pressure boilers (B-6, B76001), and Sulfur Recovery Unit, Emission Points EP-37, EP-55, EP-63, EP-71, EP-72, EP-73, EP-104, EP-143, EP-23, EP-109, and EP-111, using test methods and procedures from New Source Performance Standards, 40 CFR 60, Appendix A, Method 7E-Determination of Nitrogen Oxides Emissions from Stationary Sources and Method 10-Determination of Carbon Monoxide emissions from Stationary Sources.

(Note: Stack tests on the Sulfur Recovery Unit and all the process heaters were conducted in April, May, and June 2001.)

3. Permittee shall continuously monitor and record flue gas oxygen concentrations and firebox temperatures in accordance with the attachment "Use of flue gas oxygen monitors for combustion controls" for the boilers and heaters, Emission Points EP-37, EP-55, EP-63, EP-71, EP-72, EP-73, EP-104, and EP-143.

## USE OF FLUE GAS OXYGEN MONITORS FOR COMBUSTION CONTROLS

Within the time limits specified in General Condition VIII of this permit, the permittee shall determine the emissions of nitrogen oxides (NO<sub>x</sub>) and carbon monoxide (CO) from the permitted combustion device in accordance with test methods and procedures set out in 40 CFR 60, Appendix A, Methods 7E\* and 10 respectively. These emission determinations shall be made at:

- 1) Maximum design capacity; and
- 2) Normal operational load.

The permittee shall install a continuous oxygen monitor in the flue gas of the permitted combustion device which meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 3. A range of excess air and combustion temperature shall be established. The range shall be the oxygen content associated with NO<sub>x</sub> and CO emission rates specified for BACT in Table 2 of this permit. The range shall be determined such that the appropriate NO<sub>x</sub> and CO limits are not exceeded.

Combustion temperature and oxygen content shall be continuously recorded. Alarms shall be set to sound when the flue gas oxygen content or combustion temperature are outside of this established range and corrective action shall be taken any time an alarm is sounded. These records and records of alarm and corrective actions shall be maintained on site and available for inspection by the Office of Environmental Services, Surveillance Division.

Should any combustion equipment modifications be made such as different type burners, combustion air relocation, fuel conversion, tube removal or addition, etc., emissions correlations as described above shall be conducted within 60 days of attaining full operation after such modification. Results of all emission determinations shall be sent to the permitting authority within 45 days after completion of the tests.

\* A properly installed and calibrated continuous NO<sub>x</sub> monitor may be substituted for Method 7E.

**TABLE I**  
**BACT COST SUMMARY**

**PETROZUATA SYNCRUDE PROJECT**  
**LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY**  
**WESTLAKE, CALCASIEU PARISH, LOUISIANA, AINO. 2538**  
**PSD-LA-584 (M-4)**

Emission Point	Control Technology	Availability/ Feasibility	Negative Impacts (a)	Control Efficiency	Emissions Reduction (TPY)	Annualized Cost (\$)	Cost Effectiveness (\$/Ton)	Notes
EP-23	SCR	Yes/No	1	90%	75.1	614,198	8,183	
EP-109	SCR	Yes/No	1	90%	54.2	458,659	8,469	
EP-23 & EP-109	ULNB	Yes/Yes		0.06 lbs/MM BTU				Selected
Notes: (a) Negative impacts: 1 – economic, 2 – environmental, 3 – energy, 4 – safety. EP-23 – Boiler B-6, EP-109 – Boiler B-76001. SCR – Selective Catalytic Reduction, ULNB – Ultra Low-NO <sub>x</sub> Burner.								

**TABLE II**  
**AIR QUALITY ANALYSIS SUMMARY**

**PETROZUATA SYNCRUDE PROJECT**  
**LAKE CHARLES REFINERY, CONOCOPHILLIPS COMPANY**  
**WESTLAKE, CALCASIEU PARISH, LOUISIANA, AINO. 2538**  
**PSD-LA-584 (M-4)**

Pollutant	Averaging Period	Preliminary Screening Conc. ( $\mu\text{g}/\text{m}^3$ )	Significant Monitoring Conc. ( $\mu\text{g}/\text{m}^3$ )	Current Monitored Conc. ( $\mu\text{g}/\text{m}^3$ )	Level of Significant Impact ( $\mu\text{g}/\text{m}^3$ )	Maximum Modeled Conc. ( $\mu\text{g}/\text{m}^3$ )	Modeled + Background Conc. ( $\mu\text{g}/\text{m}^3$ )	National Ambient Air Quality Standard ( $\mu\text{g}/\text{m}^3$ )	Modeled PSD Increment Consumption ( $\mu\text{g}/\text{m}^3$ )	Allowable Class II PSD Increment ( $\mu\text{g}/\text{m}^3$ )
Particulate	24-hour	1.75	10	NR	5	NR	NR	150	NR	30
Matter	Annual	0.069	-	NR	1	NR	NR	50	NR	17
NO <sub>x</sub>	Annual	0.86	14	NR	1	NR	NR	100	NR	25
CO	1-hour	115.26	-	NR	2,000	NR	NR	40,000	NR	-
	8-hour	53.43	575	NR	500	NR	NR	10,000	NR	-
NR = Not Required										

**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

- I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.
- II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.
- III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application dated November 3, 2005, along with supplemental information dated November 30, 2005.
- IV. This permit shall become invalid, for the sources not constructed, if:
  - A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;
  - B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.

The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.

This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.
- V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.
- VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is certified as complete and the estimated date of start-up of operation. The appropriate Regional Office shall also be so notified within the same time frame.



**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

- VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.
- VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.
- IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Surveillance Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition I.
- X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.
- XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Surveillance Division with a written report as specified below.
- A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
  - B. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.
  - C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:
    - 1. Report by June 30 to cover January through March
    - 2. Report by September 30 to cover April through June
    - 3. Report by December 31 to cover July through September
    - 4. Report by March 31 to cover October through December

**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

- D. Each report submitted in accordance with this condition shall contain the following information:
1. Description of noncomplying emission(s);
  2. Cause of noncompliance;
  3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
  4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
  5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.
- E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.

XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:

- A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;
- B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;
- C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and
- D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.

XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.

XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.

**LOUISIANA AIR EMISSION PERMIT  
GENERAL CONDITIONS**

- XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.
- XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services, Air Permits Division, within ninety (90) days after the event, to amend this permit.
- XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:
1. Generally be less than 5 TPY
  2. Be less than the minimum emission rate (MER)
  3. Be scheduled daily, weekly, monthly, etc., or
  4. Be necessary prior to plant startup or after shutdown [line or compressor pressuring/depressuring for example]

These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility must comply with all applicable requirements, including release reporting under LAC 33:I.3901.

- XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:

Attention: Office of the Secretary, Legal Services Division  
La. Dept. of Environmental Quality  
Post Office Box 4302  
Baton Rouge, Louisiana 70821-4302

- XIX. Certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

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# AIR PERMIT ROUTING/APPROVAL SLIP

APPLICATION RECEIVED NOVEMBER 3, 2005

*mailed 5/24/06*



AI No.: 2538 Company: CONOCOPHILLIPS COMPANY Category: \_\_\_\_\_  
Activity No.: PER20050011 Facility: LAKE CHARLES REFINERY File Name: \_\_\_\_\_  
CDS No.: \_\_\_\_\_ Permit No.: PSD-LA-584 (M-4) Rush: Yes ☐ No ☐

Technical Review	Approved	Date Received	Date Forwarded	Comments
Permit Writer	<u>GMZ</u>	<u>11/9/2005</u>	<u>12/23/05</u>	
Env. Technology	<u>SP</u>		<u>12/23/05</u>	<u>o.f.</u>
Air Toxics Support	<u>-</u>			
PSD/NNSR	<u>BDJ</u>		<u>2/21/06</u>	<u>no noted</u>
Technical Reviewer	<u>-</u>			

Management Review	Approved	Date Received	Date Forwarded	Comments
Supervisor	<u>AMF</u>	<u>12/28/2005</u>	<u>2/7/2006</u>	
Manager	<u>D/L</u>	<u>3/2/06</u>	<u>3/2/06</u>	<u>hard public notice</u>
Advisor	<u>-</u>			
Assistant Secretary/Notice	<u>CCB</u>		<u>3/3/06</u>	
Assistant Secretary/Final	<u>CCB</u>		<u>5/19/06</u>	

DDG MAR 06 2006

BM

Please Answer All of the Following

- Fee Paid: Yes ☐ No ☐ No Fee Required ☒
- LAC 33:I.1701 Information: Yes ☐ No ☒ Date: \_\_\_\_\_
- Groundwater Approval: Yes ☐ No ☒ Date: \_\_\_\_\_ (Policy Memo 18)
- Air Toxics Support: Yes ☐ No ☒ Date: \_\_\_\_\_
- IT Questions: Yes ☐ No ☒ (Permit Manual, § 4.6, p.120)

- Compliance Histories: Yes ☐ No ☒ Received: Air ☐ HW ☐ SW ☐ Water ☐  
(New Sources or Major Mods +100 TPY Criteria, +10/25 TPY TAPs, +50 TPY VOC NSR; Memo 9)
- Application Completeness Review: Yes ☐ No ☒ Complete Date: \_\_\_\_\_ Sent Date: \_\_\_\_\_  
(LAC 33.I.1503; Memo 41)
- Public Notice of Application: Yes ☐ No ☒  
Newspaper: \_\_\_\_\_ Date: \_\_\_\_\_
- Public Notice of Proposed Permit: Yes ☐ No ☐ (LAC 33:III.531.A; Policy Memos 36 & 38)  
Newspaper: \_\_\_\_\_ Date: \_\_\_\_\_  
Newspaper: \_\_\_\_\_ Date: \_\_\_\_\_
- VOC Reduction Plan: Yes ☐ No ☒ (LAC 33:III.2113.A.4)  
No. 5-9, if No, state reason here: Reconciliation

- Affected Glycol Unit: Yes ☐ No ☐ (LAC 33:III.2116)
- Compressor Testing: Yes ☐ No ☐ Engineering Approval Date: \_\_\_\_\_ (Memo 28)
- Affected Tanks: NSPS ☐ Ka ☐ Kb ☐ Kb (60.116b) ☐ NA ☐  
Subpart K  
Other NSPS Subparts: \_\_\_\_\_
- Applicable NESHAP Subparts: Yes ☐ No ☐ Part 61: \_\_\_\_\_  
Part 63: \_\_\_\_\_
- PSD and/or NNSR Review: Yes ☐ No ☐ Pollutants: \_\_\_\_\_
- Contemporaneous Netting: Yes ☐ No ☐ Pollutants: \_\_\_\_\_
- Proposed Permit Sent to/Received by EPA (PSD, Title V, or Special)  
Date: 3/6/06 BBS ☐ Email ☒ Mail ☐
- Basis for Decision (Memo 66): Yes ☐ Date: 3/6/06 NA ☐

NA is not an acceptable answer to No. 3 - 10. If No, state the reason in the space provided.